

Title (en)
PHANTOM AND METHOD FOR THE QUALITY ASSURANCE OF A HADRON THERAPY APPARATUS

Title (de)
PHANTOM UND VERFAHREN ZUR QUALITÄTSSICHERUNG EINER HADRON-THERAPIE-VORRICHTUNG

Title (fr)
FANTÔME ET PROCÉDÉ D'ASSURANCE QUALITÉ D'UN APPAREIL DE THÉRAPIE À L'HADRON

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Application
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Abstract (en)
[origin: EP3750597A1] The invention provides a phantom and method for quality assurance of a hadron therapy apparatus used in the intensity modulated particle therapy mode. The phantom comprises a frame structure comprising a base plate, one or more energy wedges, an energy wedge first face inclined with respect to said base plate and an energy wedge second face perpendicular to said base plate, said one or more energy wedges being mounted on said base plate, a 2D detector; said one or more wedges, and 2D detector being in known fixed positions in relation to said frame structure. Said phantom comprises in addition a Spread-Out Bragg Peak wedge, said SOBP wedge having an SOBP wedge first face inclined with respect to said base plate, and a SOBP wedge second face, perpendicular to said base plate, said SOBP wedge being made of a material having a relative density higher than 1.3 preferably 1.5, more preferably 1.7, the distance between the SOBP wedge first face and SOBP second face varying between the penetration depth of a beam having an energy between the high and low limit energy of the beam of said hadron therapy apparatus. The invention also provides a method for determining the compliance of the planned SOBP with the actual SOBP.

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